

WHAT IS CLAIMED IS:

5

1. A method of an admission control device in a mobile communication system capable of providing a first communication that guarantees a predetermined quality and a second communication  
10 that does not guarantee the predetermined quality at a mobile station, comprising:

a step of sending a notification of the predetermined quality to the admission control device by the mobile station when a request for the  
15 first communication is made;

a step of calculating, by the admission control device, a reference quality admissible when a propagation quality is lowest at the mobile station; and

20 a step of determining, by the admission control device, whether to admit the request of the mobile station based on the reference quality.

25

2. The method as claimed in claim 1, wherein in the step of calculating, the admission control device calculates an assignable radio  
30 resource and calculates the reference quality based on the assignable radio resource.

3. The method as claimed in claim 2,  
wherein the assignable radio resource is calculated  
5 by subtracting a radio resource being used by  
communications different from the first  
communication from a total available radio resource.

10

4. The method as claimed in claim 2,  
wherein the assignable radio resource is calculated  
by subtracting a radio resource assigned to  
15 communications different from the first  
communication from a total available radio resource,  
said radio resource assigned to the communications  
allowing the communications to have the lowest  
propagation quality.

20

5. The method as claimed in claim 1,  
25 wherein  
in the step of determining, the admission  
control device admits the request of the mobile  
station if the predetermined quality is less than or  
equal to the reference quality.

30

6. The method as claimed in claim 1,  
wherein

the predetermined quality is in a range  
from a lower limit to an upper limit; and

5 in the step of determining, the admission  
control device admits the request of the mobile  
station if the reference quality is in the range of  
the predetermined quality.

10

7. The method as claimed in claim 1,  
further comprising:

15 a step of sending a notification of the  
reference quality to the mobile station by the  
admission control device if the predetermined  
quality is greater than the reference quality.

20

8. The method as claimed in claim 7,  
wherein

25 the predetermined quality is in a range  
from a lower limit to an upper limit; and

the mobile station changes the  
predetermined quality to the reference quality if  
the lower limit is less than or equal to the  
30 reference quality, and changes the first  
communication to the second communication if the  
lower limit is higher than the reference quality.

9. The method as claimed in claim 1,  
5 wherein the admission control device preferentially  
assigns a radio resource to the first communication  
rather than to the second communication.

10

10. A mobile communication system  
including a mobile station and an admission control  
device for controlling admission of a request from  
15 the mobile station, capable of providing a first  
communication that guarantees a predetermined  
quality and a second communication that does not  
guarantees the predetermined quality, wherein  
the mobile station includes a transmission  
20 unit configured to send a notification of the  
predetermined quality to the admission control  
device when the mobile station requests the first  
communication; and  
the admission control device includes:  
25 a calculation unit configured to calculate  
a reference quality admissible when a propagation  
quality is lowest at the mobile station; and  
a determination unit configured to  
determine whether to admit the request of the mobile  
30 station based on the reference quality.

3

11. A mobile station capable of requesting from an admission control device for a first communication that guarantees a predetermined quality and a second communication that does not guarantee the predetermined quality at the mobile station, comprising:

a transmission unit configured to send a notification of the predetermined quality to the admission control device when a request for the first communication is made; and

a modification unit configured to change the predetermined quality to a reference quality admissible when a propagation quality is lowest at the mobile station if the predetermined quality is less than or equal to the reference quality, and to change the first communication to the second communication if the predetermined quality is higher than the reference quality.

20

4

12. An admission control device for controlling admission of a request from a mobile station for a first communication that guarantees a predetermined quality and a second communication that does not guarantee the predetermined quality, comprising:

a calculation unit configured to calculate a reference quality admissible when a propagation quality is lowest at the mobile station; and

a determination unit configured to

determine whether to admit the request of the mobile station based on the reference quality.

5

13. The admission control device as claimed in claim 12, wherein the calculation unit calculates an assignable radio resource and  
10 calculates the reference quality based on the assignable radio resource.

15

14. The admission control device as claimed in claim 13, further comprising a measurement unit configured to measure a radio resource being used by communications different from  
20 the first communication;  
wherein  
the calculation unit calculates the assignable radio resource by subtracting the used radio resource from a total available radio resource.

25

15. The admission control device as  
30 claimed in claim 13, wherein the calculation unit calculates the assignable radio resource by subtracting a radio resource assigned to communications different from the first

communication from a total available radio resource,  
said radio resource assigned to the communications  
allowing the communications to have the lowest  
propagation quality.

5

16. The admission control device as  
10 claimed in claim 12, wherein  
the determination unit determines to admit  
the request of the mobile station if the  
predetermined quality is less than or equal to the  
reference quality.

15

17. The admission control device as  
20 claimed in claim 12, wherein  
the predetermined quality is in a range  
from a lower limit to an upper limit; and  
the determination unit determines to admit  
the request of the mobile station if the reference  
25 quality is in the range of the predetermined quality.

18. The admission control device as  
30 claimed in claim 12, further comprising:  
a transmission unit configured to send a  
notification of the reference quality to the mobile

station if the predetermined quality is greater than the reference quality.

5

19. The admission control device as claimed in claim 12, wherein the determination unit preferentially assigns a radio resource to the first communication rather than to the second communication.

15

20. A program for admission control of a request from a mobile station for a first communication that guarantees a predetermined quality and a second communication that does not guarantee the predetermined quality at a mobile station, comprising the steps of:

    sending a notification of the predetermined quality to an admission control device when the first communication is requested; and  
25.      changing the predetermined quality to a reference quality admissible when a propagation quality is lowest at the mobile station if the predetermined quality is less than or equal to the reference quality, and changing the first  
30 communication to the second communication if the predetermined quality is higher than the reference quality.



21. A program for operating an admission  
5 control device that controls admission of a request  
from a mobile station for a first communication  
guaranteeing a predetermined quality and a second  
communication not guaranteeing the predetermined  
quality, comprising the steps of:  
10 calculating a reference quality admissible  
when a propagation quality is lowest at the mobile  
station; and  
determining whether to admit the request  
of the mobile station based on the reference quality.

15